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Shortening of one	{	Campephilus pollens
		Campephilus malherbei
		Campephilus haematogaster
		Melanerpes erythrocephalus
		Centurus carolinus
		Centurus striatus
		Hypoxanthus rivolii
		Campethera permista
		Campethera nivosa
		Chrysopicos punctatus
		Dendropicos poecilolaemus
		Meiglyptes grammithorax
Narrowing, but little shortening	{	Xiphidiopicus percussus
		Tiga javanensis
		Mesopicos goertae
No reduction	{	Chrysophilus melanolaemus
		Leuconerpes candidus
		Asyndesmus lewisi
		Sphyrapicus varius
		Sphyrapicus ruber
		Sphyrapicus thyroideus

The value of this character in revealing the affinities of the various groups within the family is very doubtful. It is probably an adaptation of some utility during early life in the limited space of the nesting hollow, perhaps as suggested by Mr. Nichols, enabling the young birds while being fed to raise their heads through one another's wings, there being indeed photographic grounds to uphold this theory in the case of young Flickers.

*American Museum of Natural History, New York.*

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## BREEDING BIRDS OF WARLAND, LINCOLN CO., MONTANA.

BY THOMAS D. BURLEIGH.

WARLAND lies on the Kootenai River and is but a small town which owes its existence to the saw mill of the Baird-Harper

Lumber Co. It is the only town of which I have any knowledge from which there are no roads leading elsewhere. Automobiles are unknown and if one wishes to travel, walking is the only possible way except by the Great Northern Railroad. About the town there is a little open land, but the surrounding country is, with the exception of the slashing which extends for eight miles up the Cripple Horse Creek, largely covered with timber. This, on the south slope of the mountains, is western yellow pine and, as is characteristic where this species predominates, the woods are open and comparatively free from underbrush. The north slopes are covered with Douglas fir and western larch, and here the stands are thicker and underbrush is more prevalent. The mountains about the town are comparatively low in elevation, ranging in altitude from 4500 ft. to 6000 ft.

I spent the summer of 1920 in a logging camp on the Cripple Horse Creek, which I found well situated for field work. During the week I covered the slashings about the camp and the untouched timber which lay farther up the valley. My Sundays were spent in walking to Warland and working the open country there. Cripple Horse Creek is but a small stream which during this past dry summer almost completely dried up. Where it flows into the Kootenai River the valley is wide but a few miles above the camp it gradually narrows and finally forms a steep rugged gorge.

As I reached Warland late in May, I of course missed those species which breed earlier but I was in time for the bulk of the birds which prefer June in which to rear their young, and while my list is undoubtedly far from complete it will give a fair idea of summer bird life in northwestern Montana.

**Actitis macularia.** SPOTTED SANDPIPER.—This was a common summer resident along the Kootenai River. The last bird for the year was seen September 7.

**Oxyechus vociferus.** KILLDEER. This bird breeds rarely if at all for but one was seen, June 29, feeding at the edge of a field.

**Dendragapus obscurus richardsoni.** RICHARDSON'S GROUSE.—A scarce breeding bird, found well up the mountain sides.

**Bonasa umbellus togata.** CANADA RUFFED GROUSE.—A common bird of the valleys. Accustomed as I was to the birds of the east, the lack of fear shown by this species was of never failing interest to me. When one was approached it would run along the ground for a few feet and then slow down to a walk repeating this until it tired when it would

fly into a nearby tree and "cluck" angrily. A female found with newly hatched young on July 2 proved actually pugnacious, charging directly at me as I stood watching her, feathers puffed out and tail spread, uttering a low hiss and a peculiar whine, and coming within a foot of me before turning and walking slowly off to a safe distance.

**Zenaidura macroura marginella.** WESTERN MOURNING DOVE.—I have but one record for the occurrence of this species, one bird being seen in a slashing on June 15.

**Cathartes aura septentrionalis.** TURKEY VULTURE.—This species was of irregular occurrence here during the summer months but it very probably breeds. The first bird was seen June 29, soaring low overhead, and one was seen as late as Sept. 10.

**Accipiter velox.** SHARP-SHINNED HAWK.—Scarce and seen at infrequent intervals in the valley.

**Buteo borealis calurus.** WESTERN RED-TAIL.—A common summer resident. A nest found June 17 held two half grown young and was eighty feet from the ground in a large larch well up the mountain side. It was massive and evidently had been used before, and was built of sticks with a lining of fresh sprays of Douglas fir. The well picked bones of probably a rabbit were lying at the edge of the nest.

**Falco sparverius phalaena.** DESERT SPARROW HAWK.—A common bird in the slashings and in the open spots along the Kootenai River. One nest found July 18 with well grown young was fully a hundred and twenty feet from the ground in a cavity in the top of a large dead larch in an open slashing.

**Bubo virginianus pallescens.** WESTERN HORNED OWL.—Near midnight on July 31 one bird called for some time from the woods at the edge of the logging camp and on August 22 one was flushed from the top of a tall slender larch in the valley.

**Ceryle alcyon alcyon.** BELTED KINGFISHER.—A summer resident along the river. A nest found June 15 held seven well incubated eggs and was in four feet in a low bank facing the river.

**Dryobates villosus monticola.** ROCKY MOUNTAIN HAIRY WOODPECKER.—This species proved to be very plentiful in the open slashing between Warland and the logging camp. Lumbering had undoubtedly been a big factor in causing an increase in the number of these birds here for in the untouched timber farther up the valley they were rarely seen. Two nests found June 1 held noisy young.

**Dryobates pubescens homorus.** BATCHELDER'S WOODPECKER.—Unlike the last this species was decidedly scarce and seldom seen.

**Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.—A fairly common bird in the open slashings. A nest was found June 7 with well grown young, nine feet from the ground in the trunk of a dead Douglas fir in the middle of a slashing.

**Picoides americanus fasciatus.** ALASKA THREE-TOED WOODPECKER.—While not as plentiful as the last, this species was still far from scarce and showed a like preference for the open slashings. A nest found June 12 held three slightly incubated eggs and was eight feet from the ground in the trunk of a dead but still solid larch in the middle of a slashing in the valley. The male bird was incubating and flushed easily, but was quiet and showed little concern over its nest. Another nest found the same day held small young and was five feet from the ground in the trunk of a tall slender dead larch.

**Sphyrapicus varius nuchalis.** RED-NAPE SAPSUCKER.—A fairly common summer resident in the open pine woods, avoiding largely the slashings. A nest was found May 31 with five fresh eggs, forty feet from the ground in the trunk of a large living larch a short distance up the mountain side. The male bird was incubating and as is usually the case with this sex it flushed easily at the first rap on the tree.

**Sphyrapicus thyroideus.** WILLIAMSON'S SAPSUCKER.—A very scarce summer resident. To the best of my knowledge but one pair of these birds bred about Warland. The nest when found June 12 held small young and was fifty feet from the ground in the trunk of a large living larch at the edge of a slashing in the valley. After the young had flown this species was not recorded again until September 5, when one bird was seen in the open woods well toward the top of one of the mountain ridges.

**Phloeotomus pileatus abieticola.** NORTHERN PILEATED WOODPECKER.—A common bird in the valley and in the scattered ravines. During the summer months few were seen but toward the middle of September this species suddenly became much in evidence and the sight of one flying by overhead or feeding on an old log at the side of the trail was a common occurrence. At this time they were also rather noisy, their loud cackle being one of the first sounds heard at dawn and the last at dusk. One thing which interested me was the ease with which I could walk up to them. At one time I came across two feeding on an old rotten log lying on the ground and I was able, with a little care, to walk up within twenty feet of them and sit down and watch them for fully half an hour. This was a feat never dreamed of in Pennsylvania where I first became acquainted with this bird.

**Asyndesmus lewisi.** LEWIS'S WOODPECKER.—This was a fairly common summer resident in the open slashings in the valley. Four nests were found but all were inaccessible, being in the tops of the largest rottenest stubs. The lowest was sixty feet from the ground while two were fully a hundred feet up, in stubs three feet in diameter at the base and with all the bark gone.

**Colaptes cafer collaris.** RED-SHAFTED FLICKER.—Wherever there was any open country this bird was sure to be found. A nest found May 29 held seven well incubated eggs and was but four feet from the

ground in an old stump in the middle of an open field. Others seen later with young were higher than this, ranging from ten feet to fully eighty feet up in one case.

**Chordeiles virginianus hesperis.** PACIFIC NIGHTHAWK.—The first birds were seen June 4, two feeding toward dusk high overhead. They soon became plentiful in the slashings in the valley and it was here that the one nest was found. On July 2 a female was flushed from two fresh eggs lying on the bare ground close to a large Douglas fir at the edge of a slashing. On September 3 one bird was seen for the last time, flying silently by overhead.

**Chaetura vauxi.** VAUX'S SWIFT.—I have but one record for the occurrence of this species here. On August 20 six birds were seen, flying by low overhead in the valley.

**Stellula calliope.** CALLIOPE HUMMINGBIRD.—This was a fairly common summer resident in the open woods in the valley. A nest found June 1 held two slightly incubated eggs and was eight feet from the ground on a small horizontal dead limb close to the trunk of an alder overhanging a small stream in a ravine. It was composed largely of soft white plant down, with a few dry pine needles at the base, and covered externally with lichens.

**Tyrannus tyrannus.** KINGBIRD.—Although a plentiful summer resident about the town of Libby, twenty miles west of Warland, but one pair of birds bred at Warland. The nest when found July 7 held three well incubated eggs and was sixty feet from the ground in a tall slender larch in a clearing at the edge of the town. It was built of gray plant fibres, weed stems and grasses, lined with fine grasses. The last record for the year was August 9, one bird being seen at the edge of a slashing.

**Nuttallornis borealis.** OLIVE-SIDED FLYCATCHER.—A fairly plentiful summer resident about slashings and clearings in the valley. The last bird for the year was seen August 10.

**Myiochanes richardsoni richardsoni.** WESTERN WOOD PEWEE.—A scarce summer resident in the open slashings in the valley. A nest found June 21 held three incubated eggs and was twenty feet from the ground in a horizontal crotch of a small dead and somewhat bent larch in the middle of a burnt-over slashing. It was shallow but compactly built, of gray plant fibres, grasses and strands of brown moss, lined with fine grasses and feathers. Another found July 1 with three slightly incubated eggs was twenty feet from the ground in a horizontal crotch of a dead limb of a birch at the edge of a field. It was built of gray plant fibres, strips of bark and grasses, lined with fine grasses and considerable wool, the outside being sparingly covered with lichens. A third found July 4 held three slightly incubated eggs and was twenty-five feet from the ground in a horizontal crotch of a dead and somewhat bent alder at the edge of a thicket in the middle of a slashing. Like the others it was shallow but

compactly built, of gray plant fibres, grasses, strands of brown moss and, on the outside, a very few lichens, lined with brown moss and a few grasses.

**Empidonax hammondi.** HAMMOND'S FLYCATCHER.—This was an abundant summer resident and was found anywhere and everywhere, in the open country about the town, in the slashings, in the open woods in the valley and well up the mountain sides. In nesting it showed no preference for any special site and the situations chosen varied widely. In all I found ten nests, as follows:

No. 1. On May 29 a bird was seen working on a nest sixty feet from the ground at the outer end of a limb of a large yellow pine at the edge of a stretch of woods. I never had the opportunity to return to it so my data for it are meager.

No. 2. A nest found June 8 held four fresh eggs and was thirty feet from the ground near the top of a slender birch at the edge of a thicket in a slashing. It was made of gray plant fibres, grasses, strands of moss and strips of bark, lined with feathers from a Hairy Woodpecker and a few horse hairs.

No. 3. June 9, four fresh eggs, thirty feet from the ground at the extreme outer end of a limb of a large larch in open woods part way up the mountain side, made of plant fibres, grasses, strips of bark, moss and a few feathers, lined with deer hair and a little horse hair.

No. 4. June 10, four fresh eggs, fifteen feet from the ground at the outer end of a lower dead limb of a lodgepole pine at the side of the stream in the valley, made of plant fibres, strips of bark, grasses, gray moss, bits of fur and a little wool, lined with several small dead leaves, bits of fur and fine porcupine hair.

No. 5. June 11, four fresh eggs, eight feet from the ground in a small Douglas fir at the edge of a thicket bordering an open field, made of plant fibres, a few grasses, moss and plant down, lined with down, a few horse hairs and, largely at the bottom, soft bud scales.

No. 6. June 13, three slightly incubated eggs, six feet from the ground in the top of a bush, in a small clump of bushes at the edge of a clearing on the mountain side, neat and compact, of gray plant fibres and grasses, lined largely with small yellow feathers and a few grasses.

No. 7. Another nest found the same day held one fresh egg and was four feet up in a small bush, in a clump of bushes growing in a crevice of a cliff fully sixty feet from the ground. It was roughly built of gray plant fibres and down and was seemingly unlined.

No. 8.—June 20, four fresh eggs, six feet from the ground in a bush on an open rocky hillside, well built of gray plant fibres, lined with soft shreds of inner bark and plant down.

No. 9. June 25, four slightly incubated eggs, twelve feet from the ground in a small Douglas fir in a thicket at the edge of a field, made of plant fibres and grasses, lined with plant down, horse hair and soft bud scales.

No. 10. July 7, three slightly incubated eggs, ten feet from the ground in a sapling in the underbrush bordering the Kootenai River, made of plantfibres, grasses and feathers, lined with horse hair and soft bud scales.

Toward the middle of August the birds began to become scarce and on September 3 the last one for the year was seen.

**Pica pica hudsonia.** MAGPIE.—Although this bird did not breed in the vicinity of Warland it must nest close by for, appearing toward the latter part of August, it soon became fairly plentiful and small flocks were of common occurrence.

**Perisoreus canadensis capitalis.** ROCKY MOUNTAIN JAY.—A fairly plentiful resident. Secretive and shy until the young were well grown. The first birds were not seen until July 21 when three were found feeding in the larger trees near the top of the mountain behind the camp. From that date on they gradually became more plentiful and by the first of September small flocks were seen almost daily.

**Corvus corax sinuatus.** RAVEN.—This bird was a fairly plentiful resident and there were few days when one or two were not seen. They showed little fear of man and fed indiscriminately about the town and at the edge of the logging camp. A nest which had seemingly been used the past spring was found during the summer on a ledge of a cliff well up the mountain side at the edge of the Kootenai River.

**Nucifraga columbiana.** CLARK'S NUTCRACKER.—It was August 9 before I saw my first one of this species but once they began to come out of their retirement it was not long until they were quite common. They showed no hesitation in coming down into the valleys and small flocks were frequently seen in the open slashings between the camp and Warland.

**Molothrus ater ater.** COWBIRD.—Although scarce about Warland and seldom seen there, this bird was very plentiful in and about the town of Libby, some twenty miles farther west.

**Sturnella neglecta.** WESTERN MEADOWLARK.—Like the last this species was scarce about Warland, due in this case to the lack of open fields, but was very plentiful about Libby.

**Euphagus cyanocephalus.** BREWER'S BLACKBIRD.—This species was not seen at Warland but at Libby a small colony was found nesting in an open field. Of several nests found May 29 all were being built but one and this held four fresh eggs. It was in a thick clump of low bushes at the side of a stump, within a foot of the ground, and was compactly built of small twigs, weed stems and rootlets, lined with horse hair. On returning to this place on June 8, a nest previously being built was found to hold six slightly incubated eggs. It was on the ground in a clump of small bushes and against the side of an old weathered stump, and was made of twigs, weed stems, grasses and mud, lined with horse hair.

**Carpodacus cassinii.** CASSIN'S PURPLE FINCH.—This was a plenti-



ful bird not only toward the tops of the mountains but in the slashings and open woods in the valley. On my arrival in late May they were still in small flocks and evidently did not nest until the latter part of June. By the middle of September small flocks were again much in evidence about thickets and underbrush in the slashings.

***Loxia curvirostra minor*.** CROSSBILL.—On June 6 a small flock of ten birds was seen and from this date on this species gradually increased until it had become exceedingly abundant. During July and August small flocks were especially numerous and could be seen anywhere and at any time during the day, feeding in the tops of the firs or flying noisily by overhead.

***Astragalinus tristis pallidus*.** PALE GOLDFINCH.—I have but one record for the occurrence of this species here. On June 15 two birds were seen feeding in the underbrush bordering the Kootenai River.

***Spinus pinus*.** PINE SISKIN.—An abundant bird in the valley and well up the mountain sides. They had evidently finished nesting before I arrived for I invariably found them in small flocks and never singly or in pairs.

***Zonotrichia leucophrys gambeli*.** GAMBEL'S SPARROW.—This species was a scarce summer resident. I found but one pair breeding in the immediate vicinity of Warland, in the narrow stretch of deciduous underbrush bordering the Kootenai River.

***Spizella passerina arizonae*.** WESTERN CHIPPING SPARROW.—A very abundant summer resident. It showed no partiality for any given situation and nested everywhere, in the slashings, in the open woods in the valley, in thickets and underbrush well up the mountain sides, and in the open cultivated country along the river. Fresh eggs were found from the latter part of May until the last of June so evidently two broods are raised. Four eggs were the usual number laid although sets of three were not uncommon and on one occasion, June 7, I found a nest with five well incubated eggs.

***Junco hyemalis montanus*.** MONTANA JUNCO.—A common bird about open slashings and clearings in the woods. A nest found June 18 held four fresh eggs and was sunken in the ground at the top of a low bank, well concealed in the deep grass, at the side of a logging railroad and in the middle of an open slashing in the valley. It was built of grasses and strands of brown moss, lined well with fine grasses, a little deer hair and a few horse hairs. This was undoubtedly a second set for young birds out of the nest several days were seen being fed by their parents on May 31. Another nest found July 2 held three incubated eggs and was sunken flush with the ground in a clump of weeds and at the side of a large stone, in open woods at the edge of a clearing in the valley. It was large and compactly built of weed stems, grasses and strands of brown moss, lined with deer hair and, largely at the bottom, fine grasses.

**Melospiza melodia montana.** MOUNTAIN SONG SPARROW.—A fairly plentiful summer resident about thickets and underbrush in the slashings and in the open country about the town. A nest was found July 4 with four slightly incubated eggs, four feet from the ground in a cluster of birch shoots at the base of a dead birch in the underbrush at the edge of the Kootenai River. It was large and compactly built of rootlets, weed stems, strips of bark and grasses, lined with horse hair and fine grasses.

**Zamelodia melanocephala.** BLACK-HEADED GROSBIRD.—An adult male was seen June 15 in the underbrush bordering the Kootenai River so evidently a pair of these birds bred here but I saw them nowhere else during the entire summer.

**Piranga ludoviciana.** WESTERN TANAGER.—An abundant summer resident. Four nests were found, one June 4 with five slightly incubated eggs, another June 6 with four incubated eggs, a third June 22 with four well incubated eggs, and the last July 1 with four fresh eggs. These varied from twenty-five to thirty-five feet from the ground and were all at the outer end of limbs of large Douglas firs. All were alike in construction, being compactly built of fir twigs and rootlets, lined with rootlets and a few horse hairs. The female was incubating on the first nest found and would not flush and finally had to be lifted from the nest by hand.

**Iridoprocne bicolor.** TREE SWALLOW.—A scarce summer resident, two pairs being found in the slashing between the camp and the town, and one pair about the town itself. The nest of the latter pair, thirty-five feet from the ground in an old charred stub in an open field, was investigated on June 29 and found to hold fourteen incubated eggs. This exceeds by just five eggs the largest set of this species I had ever known to be taken. It was undoubtedly the product of this one pair of birds for no others were ever seen in the vicinity and the eggs were uniform in size and equally well incubated.

**Tachycineta thalassina lepida.** NORTHERN VIOLET-GREEN SWALLOW.—The only place I found this species was in the rugged gorge a few miles beyond the camp, three pairs of birds breeding in the cliffs there. The nests were in crevices well toward the tops of the cliffs and inaccessible.

**Riparia riparia.** BANK SWALLOW.—A small colony of six pairs of these birds was found nesting in a low bank at the side of the Kootenai River and just at the edge of the town. A nest dug out June 15 held six fresh eggs and was built of weed stems and grasses, thickly lined with white chicken feathers. The last record for the year was September 7, two birds being seen, feeding over an open field.

**Stelgidopteryx serripennis.** ROUGH-WINGED SWALLOW.—Several pairs of birds were found nesting with the Bank Swallows but were seen nowhere else. Two nests that were dug out on June 15 were in fully four feet and were well built of weed stems and rootlets, lined with fine

grasses. One held seven well incubated eggs and the other five but slightly incubated. The last birds for the year were seen August 10.

**Bombycilla garrula.** BOHEMIAN WAXWING.—While I did not actually find this species breeding here there is no doubt in my mind but that it did nest close by, in one of the more secluded valleys, for on Sept. 24 I saw three birds in a slashing within a short distance of the town. This was too early for them to have been driven in by the approach of winter farther north and I feel that had I been able to cover more territory I would possibly have found the spot where they were nesting.

**Bombycilla cedrorum.** CEDAR WAXWING.—A common breeding bird in the more open country, especially in the underbrush about the town and along the river. The first nest was found June 25 with four fresh eggs, in a horizontal crotch of an alder leaning well out over the river, ten feet above the water. It was built of weed stems, grasses, plant fibres and considerable brown moss, the upper part being entirely made of the last, lined, largely at the bottom, with fine dry weed stems. Another found June 29 held five incubated eggs and was five feet from the ground in a small Douglas fir in a thicket at the edge of a field. A third nest found July 4 held but two incubated eggs and was on a horizontal limb of an alder leaning well out over the river, eight feet from the water.

**Vireosylva olivacea.** RED-EYED VIREO.—Two singing males were seen during the summer, one in the alders along the creek in the valley and the other in the underbrush bordering the river. A slight but unsuccessful attempt was made to find the nests.

**Vireosylva gilva swainsoni.** WESTERN WARBLING VIREO.—A fairly plentiful summer resident, found invariably about the scattered deciduous thickets in the open pine woods on the south slopes of the mountains. A nest found June 17 held three slightly incubated eggs and was eight feet from the ground at the outer end of a limb of a maple sapling at the edge of a thicket. It was built of grasses and strands of brown moss, lined with fine grasses and a few horse hairs, the outside being more or less covered with white downy spiders' egg cases. This nest was taken and on July 1 the bird was again incubating three eggs in a nest nine feet from the ground in a maple sapling in a thicket.

**Lanivireo solitarius cassini.** CASSIN'S VIREO.—A plentiful summer resident. One nest was found and this on June 6 held four slightly incubated eggs. It was twenty feet from the ground at the outer end of a limb of a small yellow pine at the edge of a clearing in the woods and was built of crushed fragments of weed stems and grasses, lined with fine grasses, the outside being sparingly covered with white downy spiders' egg cases. On September 14 the birds were still seen daily and were frequently heard singing.

**Dendroica aestiva aestiva.** YELLOW WARBLER.—The deciduous

underbrush along the river was the only place inhabited by this species but the birds were remarkably plentiful there. Three nests were found, within a radius of five hundred yards, one June 8 with five incubated eggs, and two June 11 each with four slightly incubated eggs. Two were in birch saplings and one in a bush and all were within five feet of the ground. The nests differed in no way from those characteristic of this species, being made of gray plant fibres and grasses, lined with plant down, feathers and a few horse hairs.

**Dendroica auduboni auduboni.** AUDUBON'S WARBLER.—A plentiful summer resident. A nest found June 19 held four small young and was fifteen feet from the ground at the outer end of a limb of a Douglas fir in a ravine. It was made of gray plant fibres, grasses, feathers and a little moss, lined with feathers, deer hair and a little horse hair. This nest had a tragic ending for a forest fire swept through this ravine a few days later and the young birds were burned to a crisp.

**Dendroica townsendi.** TOWNSEND'S WARBLER.—A fairly plentiful summer resident, being found largely in the scattered ravines. From the time of my arrival until the latter part of June I spent considerable time in attempting to locate a nest but all my efforts were unsuccessful. The males fed and sang in the tops of the largest trees and it was difficult to even get a view of one let alone trail one to a nest. My experience convinced me that the birds nested high and when I think of the size of some of those western yellow pines I am not at all sure that I could have gotten to a nest if I had found one. The song of the Townsend's Warbler is quite distinctive and unlike any other of this family that I have ever heard, and I would render it as "zee, zee, zee-slee-slick," the last two notes being abrupt and high pitched and having a certain resemblance to a note of the Chickadee. Another song less commonly heard was less distinctive, being a "zee, zee, zee, tzee, tzee," the last two notes being lower in pitch than the others.

**Seiurus noveboracensis notabilis.** GRINNELL'S WATER-THRUSH.—In a dense alder swamp in the valley one pair of these birds was found breeding but several mornings spent in splashing and tumbling about through the thickets and scattered pools produced no results so far as finding the nest was concerned.

**Oporornis tolmiei.** MACGILLIVRAY'S WARBLER.—A fairly plentiful summer resident in thickets and underbrush in the valley. A nest found June 20 held four fresh eggs and was five feet from the ground in a crotch of an alder some distance away from the nearest underbrush. It was rather bulkily built of weed stems, grasses and strips of bark, lined with horse hair. This was evidently a second brood or more probably another attempt to rear young after the first nest had been destroyed, for several days before I had seen young birds already out of the nest. August 31 the last bird for the year was seen.

**Geothlypis trichas occidentalis.** WESTERN YELLOW-THROAT.—

Somewhat to my surprise this bird was not found breeding here and I have but one record for its occurrence, one bird, a fall migrant, being seen Sept. 7.

**Wilsonia pusilla pileolata.** PILEOLATED WARBLER.—This bird bred in the open mountain meadows at a higher altitude than Warland could boast of and none were seen about the town during the summer months. One bird, a spring migrant, was seen May 29 and from Aug. 26 until Sept. 14 birds were seen at infrequent intervals in thickets and underbrush in the valley.

**Setophaga ruticilla.** REDSTART.—A scarce summer resident along the river, and but rarely seen during the fall migration.

**Dumetella carolinensis.** CATBIRD.—This bird was found only in the underbrush bordering the river but it was quite plentiful there, at least six pairs nesting within a short distance of the town.

**Salpinctes obsoletus obsoletus.** ROCK WREN.—On June 1, while crossing a talus slope in the rugged gorge beyond the camp I came across one of these birds feeding among the rocks, and heard it sing several times. But one pair was seemingly breeding there and I saw no others anywhere else in the vicinity.

**Troglodytes aëdon parkmani.** WESTERN HOUSE WREN.—A common summer resident about the town and in the slashings in the valley. A nest found June 8 held seven well incubated eggs and was under the eaves of a shed. Another found June 14 held seven fresh eggs and was on the frame above the door of, and inside, an old logging camp bunk house in a slashing in the valley. It was a mass of twigs and a few weed stems and grasses, the cavity in the top being well lined with feathers and horse hair. A third nest found July 1 was the most interesting for it was built behind a loose piece of bark on a dead larch in a slashing, five feet from the ground. In construction it differed in no way from the others, being built of twigs and grasses, lined with feathers. It held one fresh egg and later was found to be deserted. The last bird for the year was seen September 14.

**Nannus hiemalis pacificus.** WESTERN WINTER WREN.—A scarce summer resident in the alder thickets along the stream in the valley.

**Certhia familiaris montana.** ROCKY MOUNTAIN CREEPER.—Although fairly plentiful during the summer months, this bird evidently bred well towards the tops of the mountains for it was not until the latter part of June that any were seen in the valley.

**Sitta carolinensis nelsoni.** ROCKY MOUNTAIN NUTHATCH.—Plentiful both in the slashings and in the open pine woods. They breed early for the first nest found May 30, twenty feet from the ground in a cavity in the top of a stub, held small young.

**Sitta canadensis.** RED-BREASTED NUTHATCH.—This species was even more plentiful than the last and likewise nested both in the slashings

and in the open pine woods. I found quite a few nests but I was unfamiliar with the breeding habits of these birds and this lack of knowledge resulted in my data consisting entirely of nests with young. As I learned to my sorrow the birds continue to carry pitch to the entrance of the nest from the time the nest is first begun until the young have flown. For over a week I watched the birds make frequent trips carrying pitch and thought all the time that they were still building but as it turned out the females were then incubating full sets. On June 16 I found a nest containing almost fully grown young that was but two feet from the ground in an old rotten stub and during the fifteen minutes that I watched the birds they made seven trips to the nest, carrying each time not food but pitch which they carefully smeared on any wood that was exposed within several inches of the entrance. Another nest that was found was fully a hundred feet from the ground in the dead top of a larch but the average height was thirty feet.

**Sitta pygmaea pygmaea.** PYGMY NUTHATCH.—Plentiful in the open slashings in the valley. After they had finished nesting they wandered about in quite large flocks and at this time were noisy and much in evidence.

**Penthestes atricapillus atricapillus.** EASTERN CHICKADEE.—I have but one record for the occurrence of this species here, two birds being seen on Augtsuf 26, feeding in underbrush in the valley.

**Penthestes gambeli gambeli.** MOUNTAIN CHICKADEE.—A plentiful resident, both in the valley and well up the mountain sides. A nest found June 6 held but three incubated eggs and was thirty-five feet from the ground in a knot hole in the trunk of a large larch in the open pine woods part way up the mountain side. It was a matted well cupped bed of deer hair and soft fur. The female was incubating and flushed when the tree was rapped. Another nest found June 10 held seven slightly incubated eggs and was but a foot from the ground in a natural cavity in an old charred stump on an open hillside. The female flushed as I passed and revealed the nest which otherwise would never have been noticed. On June 12 birds were seen feeding young in a nest fully eighty feet from the ground in the trunk of a large dead larch in a burnt-over slashing so it can be seen that this species is not at all particular as to the situation in which the nest is built.

**Regulus satrapa olivacea.** WESTERN GOLDEN-CROWNED KINGLET.—This species was a scarce summer resident and but few bred about Warland.

**Regulus calendula calendula.** RUBY-CROWNED KINGLET.—This bird was plentiful during the summer months in the open pine woods in the valley, feeding and singing in the tops of the largest trees. An attempt was made to find at least one nest, but it proved very difficult to even see the birds and trailing one to a nest was practically impossible.

**Myadestes townsendi.** TOWNSEND'S SOLITAIRE.—A fairly plentiful summer resident in the valley. A nest found May 30 held four well incubated eggs and was in a crevice in the face of a cliff at the side of the creek, twelve feet from the ground and ten feet down from the top. It was bulky but flat, of weed stems, twigs and grasses, lined with fine grasses and dry pine needles.

**Hylocichla ustulata swainsoni.** OLIVE-BACKED THRUSH.—A very plentiful summer resident. Fresh eggs were found from June 20 to July 6 and seemingly but one brood is raised. A favorite situation for the nest was in the top of a small Douglas fir within eight or nine feet of the ground although one nest was found in a birch, another in an alder and several in bushes within four feet of the ground. In construction the nests varied little being small and compact, built of weed stems, grasses and moss, lined with fine grasses, moss, and fragments of dead leaves. September 16 the last bird for the year was seen.

**Planesticus migratorius propinquus.** WESTERN ROBIN.—Coming from the east it seemed strange to me to find these birds as plentiful deep in the woods as they were about the towns and in the open cultivated country. They were abundant everywhere but away from civilization they showed a marked preference for clearings or the more open woods. One thing I did notice was that they nested earlier about the towns than in the woods for at Libby on May 29 I found nests with well incubated eggs while about the logging camp the first nests found June 3 held fresh eggs. Evidently two broods are raised for fresh eggs were found as late as July 20.

**Ixoreus naevius meruloides.** NORTHERN VARIED THRUSH.—A scarce summer resident and found invariably in secluded ravines.

**Sialia mexicana occidentalis.** WESTERN BLUEBIRD.—This species was fairly plentiful in slashings and clearings in the woods. A nest found June 11 held five fresh eggs and was four feet from the ground in a cavity in an old rotten stub in the middle of a slashing. It was substantially built of grasses. Another nest found June 15 held five fresh eggs and was ten feet from the ground in a hole in the trunk of a large dead yellow pine.

**Sialia currucoides.** MOUNTAIN BLUEBIRD.—This species was about as plentiful as the last and was found with it in the slashings, and more commonly about the town. Two nests found May 29 both held six fresh eggs, and were within four feet of the ground in cavities in stumps. One was unusually well built of weed stems, grasses, and chicken feathers, lined with feathers and soft shreds of inner red bark.

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